

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method for coloring a cellulose fiber, comprising:
a step (1) of introducing a carboxylic group or a sulfonic acid group into cellulose fiber by an adhesion curing treatment, irradiation or immobilization with a binder;
and a step (2) of treating the cellulose fiber having the carboxylic group or the sulfonic acid group introduced with an aromatic derivative having one or more hydroxyl groups and a metal salt simultaneously or separately.
- 2 (Original) The method for coloring a cellulose fiber according to claim 1, wherein carboxylic groups are introduced into the cellulose fiber by an adhesion curing treatment with a polycarboxylic acid.
3. (Original) The method for coloring a cellulose fiber according to claim 1 or 2, wherein the aromatic derivative having one or more hydroxyl groups is dihydroxybenzoic acid, dihydroxybenzaldehyde, trihydroxybenzoic acid, trihydroxybenzaldehyde, or tannic acid.
4. (Previously Presented) The method for coloring a cellulose fiber according to claim 1, wherein the metal salt is an iron salt.
5. (Original) A colored cellulose fiber, colored by the method according to any one of claims 1 or 4.

6. (Previously Presented) A method for producing a colored cellulose fiber, comprising:

a step (1) of introducing a carboxylic group or a sulfonic acid group into a cellulose fiber by an adhesion curing treatment, irradiation or immobilization with a binder; and

a step (2) of treating the cellulose fiber having the carboxylic group or the sulfonic acid group introduced with an aromatic derivative having one or more hydroxyl groups and a metal salt simultaneously or separately.

7. (Original) The method for producing a colored cellulose fiber according to claim 6, wherein carboxylic groups are introduced into the cellulose fiber by an adhesion curing treatment with a polycarboxylic acid.

8. (Original) The method for producing a colored cellulose fiber according to claim 6 or claim 7, wherein the aromatic derivative having one or more hydroxyl groups is dihydroxybenzoic acid, dihydroxybenzaldehyde, trihydroxybenzoic acid, trihydroxybenzaldehyde, or tannic acid.

9. (Previously Presented) The method for producing a colored cellulose fiber according to claim 6, wherein the metal salt is an iron salt.

10. (Previously Presented) A colored cellulose fiber, produced by the method according to claim 6.

11. (Previously Presented) The method for coloring a cellulose fiber according to claim 1, wherein a carboxylic group or a sulfonic acid group are introduced into the cellulose fiber by irradiating the fiber with an electron beam or gamma ray.

12. (Previously Presented) The method for coloring a cellulose fiber according to claim 1, wherein a carboxylic group or a sulfonic acid group are introduced into the cellulose fiber by immobilization with urethane resins, glyoxal resins or acrylic resins as a binder.

13. (Previously Presented) The method for producing a colored cellulose fiber according to claim 6, wherein a carboxylic group or a sulfonic acid group are introduced into the cellulose fiber by irradiating the fiber with an electron beam or gamma ray.

14. (Previously Presented) The method for producing a colored cellulose fiber according to claim 6, wherein a carboxylic group or a sulfonic acid group are introduced into the cellulose fiber by immobilization with urethane resins, glyoxal resins or acrylic resins as a binder.

15. (Previously Presented) The method for coloring a cellulose fiber according to claim 1, wherein treatment with a metal salt is performed by immersion or spraying.

16. (Previously Presented) The method for producing a colored cellulose fiber according to claim 6, wherein treatment with a metal salt is performed by immersion or spraying.

17. (Previously Presented) The method for coloring a cellulose fiber according to claim 1, wherein treatment with an aromatic derivative having one or more hydroxyl groups is performed by immersion or spraying.

18. (Previously Presented) The method for producing a colored cellulose fiber according to claim 6, wherein treatment with an aromatic derivative having one or more hydroxyl groups is performed by immersion or spraying.

19. (Cancelled)

20. (Previously Presented) The method for coloring a cellulose fiber according to claim 2, wherein the adhesion amount of the polycarboxylic acid is from 0.1 to 30 wt%.

21. (New) A method for coloring a cellulose fiber, comprising:
a step (1) of introducing a carboxylic group or a sulfonic acid group into cellulose fiber;
and
a step (2) of treating the cellulose fiber having the carboxylic group or the sulfonic acid group introduced with an aromatic derivative having one or more hydroxyl groups and a metal

salt simultaneously or separately,

wherein the cellulose fiber is colored without the use of a dye.